

# Audit

# Report



OFFICE OF THE INSPECTOR GENERAL

**RECOUPMENTS FOR QUALITY DEFECTS**

Report No. 93-066

March 10, 1993

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**Department of Defense**

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The following acronyms are used in this report.

CECOM.....	Communications-Electronics Command
DCMC.....	Defense Contract Management Command
DESC.....	Defense Electronics Supply Center
DGSC.....	Defense General Supply Center
DLA.....	Defense Logistics Agency
DLAM.....	Defense Logistics Agency Manual
DLAR.....	Defense Logistics Agency Regulation
FPI.....	Federal Prison Industries
PQDR.....	Product Quality Deficiency Report



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
400 ARMY NAVY DRIVE  
ARLINGTON, VIRGINIA 22202

March 10, 1993

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF THE ARMY  
DIRECTOR, DEFENSE LOGISTICS AGENCY

SUBJECT: Audit Report on Recoupments for Quality Defects  
(Report No. 93-066)

We are providing this final report for your information and use. We considered comments from the Department of the Army and the Federal Prison Industries in preparing the final report. However, the Defense Logistics Agency did not respond to the draft report. The audit is a follow-on to the Inspector General, DoD, Report No. 92-099, "Quality Assurance Actions Resulting From Electronic Component Screening," June 8, 1992.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, we request that the Defense Logistics Agency provide final comments on the unresolved recommendation and the monetary benefits, and the Army provide completion dates for their ongoing actions on Recommendations B.1. and B.3. by May 10, 1993. The Directive also requires that your comments indicate concurrence or nonconcurrence in the finding and each recommendation addressed to you. If you concur, describe the corrective actions taken or planned, the completion dates for actions already taken, and the estimated dates for completion of planned actions. If you nonconcur, you must state your specific reasons for each nonconcurrence. If appropriate, you may propose alternative methods for accomplishing desired improvements.

If you nonconcur with the estimated monetary benefits or any part thereof, you must state the amount you nonconcur with and the basis for your nonconcurrence. Recommendations and potential monetary benefits are subject to resolution in accordance with DoD Directive 7650.3 in the event of nonconcurrence or failure to comment. We also ask that your comments indicate concurrence or nonconcurrence with the internal control weaknesses highlighted in Part I.

We appreciate the cooperation and courtesies extended to the audit staff. If you have any questions on this audit, please contact Mr. Salvatore D. Guli, Program Director, at

Office of the Inspector General, DoD

AUDIT REPORT NO. 93-066  
(Project No. OCF-0062.02)

March 10, 1993

RECOUPMENTS FOR QUALITY DEFECTS

EXECUTIVE SUMMARY

**Introduction.** This audit was performed based on the results reported in the Office of the Inspector General, DoD, Audit Report No. 92-099, "Audit of Quality Assurance Actions Resulting From Electronic Component Screening," June 8, 1992. The previous report showed that limited remedies existed for recoupment (repair, replacement, or reimbursement) for defective products identified after acceptance. Further, the previous report noted that systems designed to provide quality deficiency information to contracting officers were not effective. Our follow-on audit focused on DoD actions to obtain recoupments for defective products.

**Objectives.** The audit objectives were to determine if DoD obtained recoupment for defective products from suppliers and if contractors received adequate feedback regarding the quality deficiencies described in Product Quality Deficiency Reports. An additional objective was to evaluate the overall effectiveness of internal controls related to the quality assurance actions needed to support requests for recoupments for defective products.

**Audit Results.** DoD did not obtain recoupments for contracts with defective products or provide contractors feedback on quality deficiencies.

o Quality assurance specialists at the Defense Logistics Agency's supply centers did not effectively investigate product quality deficiencies to determine the extent of the quality problem or to ensure that the cause of the quality deficiency was corrected. Consequently, recoupments were not attempted for 61 contracts (valued at \$16.9 million) of the 113 contracts (valued at \$26.9 million) cited in the Product Quality Deficiency Reports as containing defective products. Also, the supply centers did not inform contractors that they had supplied defective products and did not complete recoupment actions for defective products (**Finding A**).

o The procedures for investigating product quality deficiencies at the U.S. Army Communications-Electronics Command were incomplete, resulting in inadequate recoupment actions for

defective products. In addition, as a result of incomplete investigations, Army depots may have issued defective products (Finding B).

**Internal Controls.** Internal controls were not adequate to ensure that Product Quality Deficiency Reports were fully investigated, that information on defective products was provided to contractors, and that recoupments were pursued when justified. The internal control weaknesses were considered to be material. See Part I for the internal controls assessed and Findings A and B for details of these weaknesses.

**Potential Benefits of Audits.** We determined that recoupments of \$391,000 for defective products on 21 contracts were possible. Other benefits of the audit include increased amounts of future recoupments and reductions in the amount of defective products issued from the Defense supply system. Appendix G summarizes the potential benefits resulting from the audit.

**Summary of Recommendations.** Recommendations were made to establish procedural requirements for determining the validity of complaints in Product Quality Deficiency Reports, for determining the extent of quality defects contained in contracts, and for initiating and supporting recoupment actions. We also recommended screening inventories to eliminate defective electronic components and taking actions to obtain replacements or reimbursements for those defective products.

**Management Comments.** The Deputy Assistant Secretary of the Army (Procurement) generally concurred with all recommendations. The Communications-Electronics Command will stress laboratory testing in revisions to its internal guidance, and copies of Product Quality Deficiency Reports will be provided to contracting officers. The Deputy Assistant Secretary also stated that a legal determination was requested on the propriety of seeking reimbursement for testing, storage, transportation, and administrative costs associated with defective products supplied by the Federal Prison Industries. The Chief Executive Officer of the Federal Prison Industries also provided comments. Management comments and audit responses are summarized in Part II, and the complete texts of management comments are included in Part IV of the report.

The Director, Defense Logistics Agency did not respond to the draft report. We request that the Director provide comments to the final report and the Army provide completion dates for ongoing actions on recommendations by May 10, 1993.

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This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD. Copies of the report can be obtained from the Secondary Reports Distribution Unit, Audit Planning and Technical Support Directorate, (703) 614-6303 DSN 224-6303.

## PART I - INTRODUCTION

### Background

Products that do not conform to contract specifications are called nonconformances or defects. Similarly, the terms "defects" and "nonconformances" are used interchangeably in this audit report. The Defense Federal Acquisition Regulation Supplement, subpart 246.407, "Nonconforming Supplies or Services," refers to nonconformances as critical, major, and minor. If a nonconformance is critical it affects the safety or health of personnel. A critical nonconformance would also be major in that the nonconformance would likely result in failure or would materially reduce the usability of the supplies or services for their intended purposes.

Defense organizations usually identify defective products through the Product Quality Deficiency Report (PQDR) Program. The PQDR Program provides a system for reporting product quality defects, correcting the causes, and providing feedback to contractors on product quality defects. The PQDRs are generally prepared by maintenance, engineering, or user personnel employed by a DoD Component. In addition, some PQDRs are prepared by DoD contractors when they use Government-furnished material or equipment to complete a contract. The Joint Service Regulation, Defense Logistics Agency Regulation (DLAR) 4155.24, "Product Quality Deficiency Report Program," establishes the general guidance for the PQDR Program.

The Defense Logistics Agency (DLA) Manual (DLAM) 4155.2, "Quality Assurance Program Manual for Defense Supply Centers and Defense Industrial Plant Equipment Centers," provides guidance to the Defense supply centers for investigating Category I and Category II product quality deficiencies. Category I product quality deficiencies may cause death, injury, or severe occupational illness; would cause loss or major damage to a weapon system; would critically restrict the combat readiness capabilities of the using organization; or would result in a production line stoppage. All other product quality deficiencies are Category II because they do not meet the criteria set forth for Category I. A critical nonconformance meets the criteria for a Category I product quality deficiency.

When Category I product quality deficiencies become known, existing procedures require immediate action to screen for defective products in the supply system and to investigate the quality deficiency as a priority action. DLA officials estimate that less than 1 percent of all PQDRs are valid Category I product quality deficiencies. Whether Category I or II, DoD should provide feedback to the contractor to correct the cause of the quality deficiency. In this regard, requests for recoupment may provide the most effective communication.



Recoupment for defective products may consist of repair, replacement, or reimbursement. The Defense Federal Acquisition Regulation Supplement, subpart 246.407, describes some of the remedies available to contracting officers for recoupment after defective products are identified in contract shipments accepted by the Government. Contracting officers shall notify contractors of nonconforming products in writing and request that contractors investigate PQDRs. In addition, contracting officers may also request that contractors voluntarily repair or replace defective products at no cost to the Government. Contracting officers may accept reimbursement for the costs of the defective product if it is offered. Contractors may refuse to repair or replace most defective products because the Government's acceptance of patently defective products is final.

### Objectives

The audit objectives were to determine if DoD obtained recoupment for defective products from suppliers and if contractors received adequate feedback regarding the quality deficiencies described in PQDRs. The audit also evaluated the overall effectiveness of internal controls related to the quality assurance actions needed to support requests for recoupments for defective products.

### Scope

Audit information and methodology. We reviewed the recoupment actions related to 314 PQDRs that were recorded against 113 contracts awarded to 19 contractors between October 1, 1985, and September 30, 1990. The contracts were valued at about \$26.9 million (Appendix A). Of the 113 contracts, the Defense Electronics Supply Center (DESC) awarded 82 contracts, the Defense General Supply Center (DGSC) awarded 23 contracts, and the U.S. Army Communications-Electronics Command (CECOM) awarded 8 contracts.

We did not rely on computer-generated information to achieve the audit objectives or use statistical sampling procedures in this audit. The audit results were not projected to an overall universe of electronic product procurements. The quality deficiency information was obtained from PQDR and contract files, interviews with quality assurance specialists and action officers, administrative contracting officers, and quality assurance representatives within the Defense Contract Management Command (DCMC). The recoupment information was obtained from contract files and quality assurance files. We verified the amounts of funds recouped by examining finance and accounting records.

We considered that recoupment actions were sufficiently supported when PQDR investigations included inventory screening for defective products, validation through laboratory testing or testing performed for contractor investigations, or both.

Audit period, standards, and locations. The audit was conducted from November 1991 to May 1992 at CECOM, DESC, DGSC, and DCMC. This economy and efficiency audit was made in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. Accordingly, the audit included such tests of internal controls as were considered necessary. Appendix I lists the activities visited or contacted.

### Internal Controls

We evaluated internal controls related to the PQDR Program as described in DLAR 4155.24, DLAM 4155.2, and CECOM Regulation 702-20, "Procedures for Processing Quality Deficiency Reports." We also evaluated DESC, DGSC, and CECOM procedures for informing contracting officers and contractors of PQDRs. In addition, we examined internal control procedures to ensure that quality assurance personnel knew how to support requests for recoupment from contractors who supplied defective products. The audit identified material internal control weaknesses as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38.

We found that internal controls were insufficient to ensure the performance of PQDR Program procedures. Quality assurance specialists were not validating the PQDRs, and inventories were not screened to eliminate defective products. Also, quality assurance specialists failed to inform administrative contracting officers and the contractors who supplied defective products to DoD of the existence of PQDRs. Additionally, supervisory reviews of PQDR files were ineffective during the PQDR recoupment process. Recommendations A.1.a., A.1.b., A.3.d., and B.2., if implemented, will correct the internal control weaknesses; however, we could not determine the monetary benefits to be realized by implementing those recommendations. A copy of this report will be provided to senior officials responsible for internal controls within the Army and DLA.

### Prior Audits and Other Reviews

Since 1989, problems with the PQDR Program were described in six audit reports and one inspection report. The most recent report was issued by the Inspector General, DoD, Report No. 92-099, "Audit of Quality Assurance Actions Resulting From Electronic Component Screening," June 8, 1992. The report described problems with the collection, distribution, and use of quality deficiency information in DoD. The report also found that testing of electronic components was inadequate to identify and follow up on contractors who provided defective electronic components. In addition, DoD did not have effective remedies to obtain reimbursement or replacement for major and critical nonconforming products. Before making recommended Defense Federal Acquisition Regulation Supplement changes to improve the

ability of DoD to obtain recoupments for defective products, the Director of Defense Procurement requested the DLA to determine the feasibility of conducting a test concerning the recommended changes. The test would include major and critical nonconformances as exceptions to acceptance in the standard inspection clause. As of the date of this report, negotiations were still ongoing on the test and regulatory changes. The Army, Navy, Air Force, and DLA generally concurred with the report's findings and other recommendations.

Appendix B synthesizes the other five audit reports and the inspection report.

## PART II - FINDINGS AND RECOMMENDATIONS

### FINDING A. RECOUPMENT ACTIONS AT DEFENSE SUPPLY CENTERS

Defense supply centers, such as DESC and DGSC, did not perform complete quality assurance investigations needed to obtain recoupments for defective electronic products. The investigations were incomplete because quality assurance specialists frequently curtailed investigations of PQDRs without validating quality deficiencies through product testing or verification with the supplier, and the inventory was not screened for other defective products. In addition, the supervisors of quality assurance specialists did not ensure that PQDRs were completely investigated. Consequently, the Defense supply centers did not attempt recoupment for the defective products supplied in 61 contracts valued at \$16.9 million. Also, the Defense supply centers assumed the risk of continuing to issue defective products to DoD activities after receiving repeated PQDRs on the same contract.

#### DISCUSSION OF DETAILS

##### Background

The PQDR Program was designed in part to identify and purge defective products from the inventory and to provide feedback to contracting officers and contractors. DIRM 4155.2 states that the Quality Assurance Directorate at each Defense supply center is the action point for PQDRs.

As the action points, Quality Assurance Directorates are responsible for processing and investigating PQDRs and ensuring that corrective action is completed. Investigating a PQDR involves determining its validity and the extent of defective products in the inventory and establishing a basis for recoupment for defective products supplied by contractors. Appendix C summarizes action point responsibilities for processing, investigating, and taking corrective action.

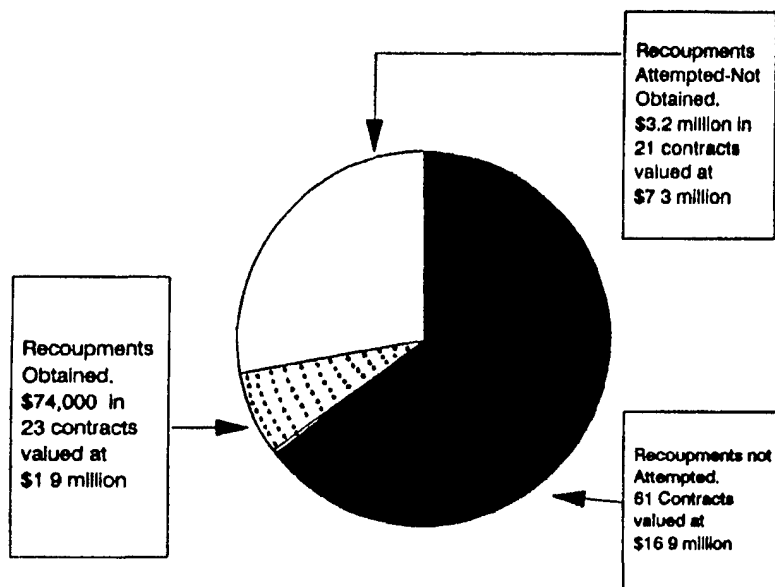
The extent to which quality assurance actions are exercised on a PQDR depends on the reasonableness and cost-effectiveness of completing the action. Reasonableness is determined by evaluating the risk of issuing defective products to an operational unit. Cost-effectiveness is measured by comparing the costs of completing the action with the anticipated benefits, such as recoupment for the defective products.

##### Recoupments for Defective Products

DESC and DGSC were responsible for 105 of the 113 contracts in the audit universe. We determined that the two Defense Supply Centers did not attempt to obtain recoupments for the defective

products supplied on 61 of those 105 contracts. Of the remaining 44 contracts, we found that recoupment attempts either were directed to small portions of the contract or were unsuccessful, as shown in the following graph.

**RECOUPMENTS ON 105 CONTRACTS**  
**VALUED AT \$26.100,000**



Of the 105 contracts valued at \$26.1 million, the Defense Supply Centers recouped \$74,000 for the defective electronic products supplied in 23 contracts valued at \$1.9 million. In addition, the Defense Supply Centers unsuccessfully attempted to recoup \$3.2 million on 21 contracts valued at about \$7.3 million. Further, there were no attempts to obtain recoupment on 61 contracts valued at \$16.9 million. Appendix D summarizes the recoupment actions for each buying center.

We evaluated the investigative actions on the 105 contracts and determined that the inventory was not screened on 58 contracts. Of these 58 contracts, we determined that it was still reasonable and cost-effective to screen for about \$2.5 million of defective products on 21 contracts. We believe the potential exists for recouping about \$391,000. Appendix E lists the contracts that should be screened for potential recoupment action.

**PQDR Investigations**

The Defense Supply Centers' recoupment actions were incomplete because the PQDR investigations either were not sufficient or were not attempted. Of the 105 contracts with quality deficiencies, we found that PQDRs on 18 contracts were completely investigated, 52 were partially investigated, and 35 were not

investigated. Appendix F summarizes the investigative actions taken on the PQDRs, which relate to the 105 contracts. Audit results and opinions were based on the criteria stated in DLAM 4155.2 for investigating, testing, and screening.

**PQDR investigations - DESC.** DESC was the action point for the PQDRs recorded against 82 of the 105 contracts. DESC did not investigate the PQDRs on 16 contracts, partially investigated the PQDRs on 49 contracts, and completely investigated the PQDRs on 17 contracts. Audit results showed that DESC should have completely investigated the PQDRs on 35 of the 65 contracts with PQDRs that were not completely investigated.

**Isolated instances.** Of the 16 contracts that were not investigated, the quality assurance specialist determined that the PQDRs processed against 14 contracts were isolated instances and the nature of the PQDRs on the other 2 contracts did not warrant an investigation. Of the 14 PQDRs, 2 or more were recorded against 3 contracts, while the remaining 11 had 1 PQDR. The DESC did not have a definition of an isolated instance.

**Laboratory testing.** DESC performed laboratory tests to validate PQDRs recorded on 48 contracts but did not perform laboratory tests to validate PQDRs recorded on 34 contracts. Audit results showed that DESC should have performed laboratory testing for PQDRs recorded on 13 of the 34 contracts.

**Inventory screening.** DESC requested and verified that inventory was screened for defective products supplied on 45 contracts but did not request inventory screening or verify that inventory was screened for defective products supplied on 37 contracts. Audit results showed that DESC should have requested inventory screening and verified that inventory was screened for PQDRs recorded on 15 of the 37 contracts.

**PQDR investigations - DGSC.** DGSC was the action point for the PQDRs recorded against 23 of the 105 contracts, all of which were awarded to Federal Prison Industries (FPI), trade name UNICOR, for electronic cable assemblies. FPI provides a lifetime warranty on the materiel and workmanship applicable to the electronic cable assemblies.

**Isolated instances.** DGSC did not investigate the PQDRs on 15 of the 23 contracts because quality assurance specialists identified the quality deficiencies as isolated instances. Further, DGSC did not have a definition for an isolated instance. In one instance, 16 PQDRs were processed against a single contract for special electronic cable assemblies. The quality assurance specialist identified all 16 PQDRs as isolated instances because the total number of defective cable assemblies (18) identified in the PQDRs was not a significant portion of the overall contract quantity (3,384). However, the quality assurance specialist made no attempt to determine the extent of

the defective cable assemblies in the inventory. In our opinion, the quality assurance specialist should have initiated an investigation upon receipt of multiple PQDRs.

**Laboratory testing.** DGSC did not use laboratory tests to validate PQDRs recorded against the 23 contracts. Audit results showed that DGSC should have performed laboratory tests on PQDRs recorded against 13 of 23 contracts.

**Inventory screening.** DGSC did not request inventory screening related to the defective cable on 21 of the 23 contracts. Audit results showed that DGSC should have directed DLA depots to perform at least partial screening on inventory related to defective cables on PQDRs recorded against 12 of the 21 contracts.

We also found that DGSC did not take advantage of the lifetime warranty that covers defects in materiel and workmanship that FPI offered on electronic cables. Audit interviews with quality assurance specialists showed that they were unaware that the cable was under warranty for the life of the product.

The cost to investigate a PQDR is significant and should be measured against the potential benefits. The current remedies for recouping the costs of investigations for defective products are limited in most cases. However, recoupment limitations may not apply to products purchased from FPI because DoD is required to buy from FPI when FPI claims the contract. Therefore, DoD activities should request FPI to reimburse laboratory costs incurred to identify defective products and administrative costs incurred for removing the defective products from the Defense supply system.

#### **Criteria for PQDR Investigation**

Quality assurance specialists did not initiate complete PQDR investigations because they classified many PQDRs as isolated instances. DLAM 4155.2 does not include official guidance for determining what constitutes an isolated instance. Quality assurance specialists used unwritten guidance for determining what constituted an isolated instance. Isolated instance determinations were an accepted unwritten practice made when a small number of defective parts or a small percentage of the overall contract quantity were reported on a PQDR. Consequently, there were inconsistent and, at times, improper classifications of PQDRs as isolated instances.

The lack of investigations was attributable to commonly accepted practices that encouraged the use of abbreviated investigations at the Defense supply centers. DLA described these practices in a proposed draft of revisions to DLAM 4155.2. DLA staffed the proposed revisions with DESC and DGSC during the audit. The proposed revisions described conditions under which quality

assurance specialists did not have to investigate a Category II PQDR. These conditions included a determination of whether the defect was minor, noncritical, or an isolated instance.

In addition to the unofficial guidance, DGSC supplemented the guidance in DLAM 4155.2 with DGSC-Q Staff Memorandum 4155.30, "Quality Deficiency Report Responses and Attendant Action," July 27, 1990. The supplement provides quality assurance specialists with a comprehensive checklist of quality assurance actions. The checklist includes laboratory testing and stock screening. However, the checklists were not used on the PQDRs included in our audit. Even if the checklists were used, there was no requirement to document the results of the actions taken because of the checklist, such as recording the number of potentially defective items remaining in the inventory. We believe that the guidance should require documenting the actions taken in each PQDR file.

### Performance Standards

We found that important aspects of investigating and processing PQDRs were not included in the job requirements for quality assurance specialists. Examination of the performance standards for quality assurance specialists and their supervisors showed that the standards were general descriptions of their duties. The standards did not refer to the criteria for conducting a complete investigation or to the essential elements of a complete investigation. Based on their performance standards, quality assurance specialists could perform their jobs satisfactorily without validating PQDRs, without initiating action to have inventory screened, or without informing contractors of quality deficiencies. We believe that performance standards should include these PQDR investigative actions. Quality assurance specialists should be required to document the results of the investigations or state why PQDRs were not investigated.

### PQDR Feedback

The PQDRs provide valuable quality information to contractors regarding applicable quality controls. Contractors were not informed of the quality deficiencies on 55 of the 105 contracts awarded by the supply centers. "Contractor noncompliance with contract specifications" was cited as the cause of the nonconformances in all 105 contracts. For the 55 contracts, this negative PQDR information was recorded in the DLA quality history database of contractor performance without informing the contractor.

DESC was the PQDR action point on 82 contracts. DESC did not inform contractors on 37 of 82 contracts, and administrative contracting officers on 43 of 82 contracts, of the existence of PQDRs recorded against the contracts. DGSC was the PQDR action



point on 23 contracts. DGSC did not inform FPI and the administrative contracting officers of the existence of PQDRs recorded against 18 of 23 contracts awarded to FPI.

Also, recoupment actions were taken by quality assurance specialists at DESC and DGSC on 44 contracts, but the information about the recoupment actions was not recorded in 12 of the 44 contract files. Contracting officers should be fully aware of the recoupment actions taken on all contracts and the results should be fully documented in the contract file.

### PQDR Oversight

The PQDR files were not organized and documented to record the actions taken to investigate and correct the causes of quality deficiencies. We determined that quality assurance actions were incomplete on 87 of the 105 contracts in our audit (Appendix F). The PQDRs were usually closed without determining the extent of the quality problems.

Quality assurance supervisors did not document their reviews of PQDR files to determine the actions taken to test and validate the PQDR complaint, to provide feedback to contractors about defective product, and to initiate recoupment actions. In our opinion, quality assurance actions were incomplete because the supervisory reviews of PQDR actions were generally incomplete and ineffective. For example, one quality deficiency in our review was recorded against a flight critical item, but the PQDR was not properly processed as a Category I product quality deficiency. The actions taken by the quality assurance specialist and the supervisory reviews were inadequate.

The item, a linear motion potentiometer (NSN 5905-00-990-5996) supplied by Litton Potentiometer, is used in the Navy H-2 aircraft. A PQDR on the linear motion potentiometer was issued April 13, 1989. The quality assurance specialist established a suspense date for completion of the PQDR of 60 days (Category II PQDR time frame should be 53 days), instead of the 29 days prescribed for a Category I PQDR. On June 29, 1989, a second PQDR was received on the same contract and stock number and was again treated as a Category II. A laboratory test was requested on September 15, 1989. Immediate testing was requested because failure of the item could be life threatening. The laboratory test report recorded that the item was critical and that it failed an electrical residual resistance test on October 20, 1989, 150 days after receipt of the first PQDR. The first PQDR was closed November 20, 1989, 221 days after the PQDR was initiated. The quality deficiencies were never upgraded to Category I, even though the PQDR file was reviewed by the quality assurance specialist and the supervisor. After 221 days, the inventory was screened for defective products and all other

quality assurance actions were completed for the potentiometer. Internal controls do not exist to preclude similar future oversights.

### Conclusion

The Defense supply centers did not attempt to obtain replacements or monetary reimbursements for a significant amount of defective products because quality deficiency investigations were not conducted. Of the quality deficiencies that were evaluated during the audit, about 62 percent of the quality deficiencies on 105 contracts should have been completely investigated. The Defense supply centers completely investigated about 17 percent of the quality deficiencies.

The failure to perform thorough investigations of product quality deficiencies sends the wrong message to contractors who supply defective products. Those contractors may believe that DoD will not pursue recoupment for defective products. Similarly, incomplete investigations of product quality deficiencies defuses the feedback function of the PQDR Program. Feedback on the quality deficiency may be what some contractors need to correct quality control deficiencies. Thorough investigations also lessen the likelihood that defective products will be issued to operational units.

### RECOMMENDATIONS FOR CORRECTIVE ACTION

1. We recommend that the Director, Defense Logistics Agency:

a. Revise Defense Logistics Agency Manual 4155.2, "Quality Assurance Program Manual for Defense Supply Centers and Defense Industrial Plant Equipment Centers," to:

(1) Require quality assurance specialists to document their evaluation of the need to test or not test after two Product Quality Deficiency Reports are recorded against the same contract and national stock-numbered item.

(2) Require quality assurance specialists to document their evaluations of whether or not on-hand inventory should be screened when products with major nonconformances are discovered.

(3) Require Defense supply centers to fully inform contractors of the existence of Product Quality Deficiency Reports, unless otherwise instructed by legal counsel.

(4) Require quality assurance specialists to maintain organized and fully documented files on Product Quality Deficiency Reports and record and describe investigative and final disposition actions. Recordkeeping should document actions

taken to test and screen inventories, to obtain recoupment for defective products, and to close out Product Quality Deficiency Reports.

(5) Require the supervisors of quality assurance specialists to document their review of Product Quality Deficiency Report files to ensure that the files fully describe the investigation and disposition of Product Quality Deficiency Reports.

(6) Define an "isolated instance" as one that is a sole occurrence, unsupported by the existence of any additional quality defects.

(7) Require quality assurance specialists to take advantage of the Federal Prison Industries lifetime warranty that covers defects in materials and workmanship for electrical products.

b. Establish critical elements in the performance standards of quality assurance specialists and their supervisors that require compliance with the Product Quality Deficiency Report processing procedures described in Defense Logistics Agency Manual 4155.2.

2. We recommend that the Commander, Defense Electronics Supply Center, Defense Logistics Agency, screen the inventories in the Defense depots to identify defective products supplied under the contracts listed in Appendix E and request replacements or reimbursements from the contractors.

3. We recommend that the Commander, Defense General Supply Center, Defense Logistics Agency:

a. Perform random laboratory tests of products from Federal Prison Industries contracts to determine the extent of major nonconforming products.

b. Screen the inventory for defective products supplied under the contracts listed in Appendix E and request replacements from Federal Prison Industries.

c. Submit charges to Federal Prison Industries for the testing, storage, transportation, and administrative costs associated with the identification and administration of major nonconforming products.

d. Update Defense General Supply Center-Quality Staff Memorandum 4155.30, "Quality Deficiency Report Responses and Attendant Action," July 27, 1990, to require documentation showing the actions taken to respond to each Product Quality Deficiency Report.

#### MANAGEMENT COMMENTS

The Director, Defense Logistics Agency did not respond to the draft report; therefore, we request that the Director provide comments to the final report by May 10, 1993. Although we did not address recommendations to the Federal Prison Industries, we have included their comments in Part IV of the report. Recommendation 1.a.(7) was revised to reflect that Federal Prison Industries warranties specifically cover defects in materials and workmanship. Appendix H provides our response to Federal Prison Industries' comments.

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## **FINDING B. RECOUPMENTS FOR ARMY ELECTRONIC CABLE**

CECOM did not perform complete quality assurance investigations needed to obtain recoupments for defective electronic cable. The investigations were incomplete because CECOM's procedures for investigating PQDRs did not include provisions for laboratory testing and for informing the contracting officer of defective products. As a result, CECOM did not attempt to identify all defective products contained in eight contracts valued at \$836,000 for recoupment. In addition, Army supply activities assumed the risk of issuing potentially defective products.

### **DISCUSSION OF DETAILS**

#### **Background**

Implementing guidance for the PQDR Program at CECOM is provided in CECOM Regulation 702-20, and CECOM Concurrent Engineering Directorate Memorandum 10-95, "Processing Product Quality Deficiency Reports," May 9, 1991.

CECOM Regulation 702-20 provides the policies and procedures for investigating product quality deficiencies and for testing, screening, and providing feedback to DCMC and the contractor. The CECOM Concurrent Engineering Directorate Memorandum 10-95 includes guidance also for investigating PQDRs.

#### **Recoupments for Defective Products**

CECOM recouped about \$12,900 from FPI for defective material contained in six of eight contracts. The \$12,900 recoupment may only represent a fraction of the defective products supplied under the eight contracts valued at about \$836,000. CECOM did not adequately investigate the PQDRs because testing was not used to determine the extent of major nonconformances present in electrical cable supplied by FPI on the eight contracts. In addition to not being tested, Army depot inventories were not screened to determine the extent of the defective products supplied under two contracts that were confirmed to have products with major nonconformances. The potentially defective products, not identified, were either issued to using Army organizations or still remained in Army inventories.

We analyzed PQDRs issued on eight CECOM contracts and found that five were partially investigated and three were not. We determined that the inventories on four contracts were screened and four were not. Of the four contracts not screened, multiple quality deficiencies were recorded against two and the other two were not screened because the quality deficiencies were categorized as isolated instances.

The cost to identify defective products for some contracts may cost more than the benefits. However, since DoD is required by law to buy from FPI, and FPI is part of the Bureau of Federal Prisons, a Government agency, then FPI should be obligated to reimburse DoD for all costs associated with the determination and identification of nonconforming products. The reimbursement of testing and screening costs coupled with the replacement of defective products should make most investigations cost-effective.

#### Product Testing

The CECOM quality assurance action officers did not recommend testing any defective electronic cable supplied in the eight FPI contracts. The CECOM should have used laboratory testing to validate reported deficiencies and to determine if other major nonconformances existed in seven of the eight contracts. Our review of CECOM Regulation 702-20 showed that laboratory testing was not sufficiently described as a primary tool in the investigation of PQDRs. Laboratory testing was not included in any context in the CECOM Concurrent Engineering Memorandum 10-95.

The CECOM quality assurance action officers did not use laboratory testing partly because they were not aware that funds were available for testing. As a result of our audit, a misunderstanding concerning the apparent lack of funding for product testing was corrected. Representatives from the CECOM Materiel Management Directorate informed managers in the Concurrent Engineering Directorate that funds were available for laboratory testing.

#### PQDR Feedback

Quality assurance action officers failed to inform CECOM contracting officers of any PQDRs recorded on FPI contracts and did not inform administrative contracting officers at DCMC about the quality deficiencies on two of the eight contracts. According to CECOM Concurrent Engineering Directorate managers, the Contracting Directorate is only informed of PQDRs if there is a latent defect, an apparent fraud or evidence of a recurring problem with the manufacturing process, or other reasons requiring a contract modification. Using the recurring-problem criterion, the quality assurance action officers should have informed contracting officers at the Contracting Directorate of the PQDRs for all eight contracts.

#### RECOMMENDATIONS, MANAGEMENT COMMENTS, AND AUDIT RESPONSE

We recommend that the Commander, Communications-Electronics Command, U.S. Army Materiel Command:

1. Revise Communications-Electronics Command Regulation 702-20, "Procedures for Processing Quality Deficiency Reports,"

and Communications-Electronics Command Concurrent Engineering Memorandum 10-95, "Processing Product Quality Deficiency Reports," to establish laboratory testing as an important tool in the comprehensive investigation of a product quality deficiency.

2. Provide the Contracting Directorate with copies of validated Product Quality Deficiency Reports that relate to recoupment actions against contractors.

3. Request reimbursement from Federal Prison Industries for all of the testing, storage, transportation, and administrative costs associated with the determination and identification of defective inventory.

**Management comments.** The Deputy Assistant Secretary of the Army (Procurement) either concurred or partially concurred with all recommendations. On Recommendation B.1, the Deputy Assistant Secretary stated that CECOM Regulation 702-20 and CECOM Concurrent Engineering Memorandum 10-95 were under revision and these documents will stress testing as an important tool in resolving PQDRs. For Recommendation B.2., action was taken to provide the contracting directorate with the needed reports. The Deputy Assistant Secretary partially concurred with Recommendation B.3., stating that CECOM was reimbursed by FPI for the defective items identified and has requested a legal determination of the propriety of seeking reimbursement for testing, storage, transportation, and administrative costs associated with defective inventory.

**Audit response.** Based on management's comments we deleted Recommendation B.1 of the draft report because no products were left in the inventory to screen. Accordingly, we renumbered the three remaining recommendations in the final report. We request that the Army provide completion dates for the ongoing actions on Recommendations B.1. and B.3., and the results of the legal determination on Recommendation B.3.



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### PART III - ADDITIONAL INFORMATION

- APPENDIX A - Contractors Included in the Audit
- APPENDIX B - Synopses of Prior Audits and  
Other Reviews
- APPENDIX C - Product Quality Deficiency Report  
Action Point Responsibilities
- APPENDIX D - Summary of Recoupment Actions
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Actions
- APPENDIX F - Summary of Investigative Actions
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Resulting from Audit
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Industries Comments
- APPENDIX I - Activities Visited or Contacted
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# **APPENDIX A - CONTRACTORS INCLUDED IN THE AUDIT**

Contractor	Cage 4 Code	FSC 5	Number of 1 Contracts With Quality Deficiencies FYs 1978-1990	Number of 2 Contracts With Quality Deficiencies FYs 1986-1990	Value of 3 Contracts With Quality Deficiencies FYs 1986-1990
American Trans-Coil Corporation	18212	5950	5	4	\$ 37,000
Astrocom Electronics, Incorporated	18068	5965	7	4	5,824,000
Coast Magnetics	22558	5950	6	5	14,000
Electro Dynamics Crystals Corporation	18853	5955	11	5	2,000
Freed Transformer Company	73386	5950	15	4	11,000
Hewlett-Packard Company	38868	5985	9	5	424,000
Hydra Electric	98505	5930	7	5	258,000
Hytronics Corporation	29525	5950	9	2	9,000
Litton Potentiometer Division	04454	5905	13	8	366,000
M P D, Incorporated	33173	5960	9	4	1,501,000
McGuire Products Company	00814	5905	28	17	18,000
Microtech, Incorporated	54647	5985	9	4	140,000
Miller R A Industries, Incorporated	05211	5985	9	5	350,000
National Electronics	83781	5960	9	5	3,425,000
Sonetronics, Incorporated	16575	5965	9	4	7,569,000
Struthers Electronics Corporation	00341	5985	9	1	78,000
UNICOR FPI - Oxford, Wisconsin	53753	5995	40	10	1,186,000
UNICOR FPI - Lexington, Kentucky	54736	5995	37	12	2,881,000
UNICOR FPI - Memphis, Tennessee	55928	5995	23	9	2,849,000
Total			274	113 6	\$26,942,000

1 Contracts were awarded during FYs 1978 through 1990 and PQDRs were initiated during FYs 1988 through 1990.

2 Contract were awarded 1986 through 1990 and PQDRs were initiated during FYs 1988 through 1990.

3 Contract values rounded to the nearest thousand.

4 CAGE Code - Commercial and Government Entity Code.

5 Federal Supply Class.

6 There were 314 Product Quality Deficiency Reports recorded against the 113 contracts.

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## APPENDIX B - SYNOPSES OF PRIOR AUDITS AND OTHER REVIEWS

**Army Audit Agency Report, "Audit of Quality of Materiel, U.S. Army Materiel Command,"** January 16, 1990, reported that data essential to manage and evaluate the quality deficiency investigation and resolution process either were not recorded or were not recorded correctly. The report made three recommendations to correct the problems. Management nonconcurred with two of the recommendations but stated that a planned on-line system would correct the reported problems. The Army Audit Agency agreed that the command actions would resolve the problems in the long-term, but stated that until the revised on-line system and controls were operational, the system would be subjected to the same wholesale data omissions, inaccuracies, and incompleteness found during the audit.

**Army Audit Agency Report, "Audit of Quality of Materiel, U.S. Army Communications-Electronics Command,"** December 15, 1989, reported that PQDR data were incomplete, and that deficiencies were not investigated and reported correctly in the deficiency reporting system. In addition, the Holding Contractors Liable Program and the Contractors Requiring Special Attention Program were not carried out properly. The recommendations for improvements were made based on four findings, and CECOM generally concurred with these recommendations.

**Air Force Audit Agency Report No. 809062016, "Management of the Depot Maintenance Quality Assurance Program,"** September 20, 1990, reported that quality deficiency reports were not adequately analyzed to ensure prompt resolution of quality defects and that installation maintenance organizations were not reporting all quality defects. The report made two recommendations to correct the problems. Management concurred with both recommendations.

**Inspector General, DoD, Report No. 90-113, "Nonconforming Products Procured by the Defense Industrial Supply Center,"** September 27, 1990, reported that the estimated value of major nonconforming parts procured by the Supply center in 1986 and 1987 was \$171.6 million and that the PQDR Program was ineffective and incomplete. The PQDR Program problems included incomplete records in the Quality Evaluation Program and failure to generate a PQDR when nonconforming products were accepted at destination. DLA generally concurred with recommendations to correct the problems and stated that the implementation of the DLA Action Plan for Continuously Improving the Quality of Spare and Repair Parts in the DoD Logistics System would cover the intent of the recommendations.

**Inspector General, DoD, Inspection Report No. 90-INS-17, "DoD Quality Assurance Program,"** August 29, 1990, reported that administrative contracting officers were not seeking

## APPENDIX B - SYNOPSES OF PRIOR AUDITS AND OTHER REVIEWS (cont'd)

consideration for excessive amounts of minor nonconforming material. The report recommended that DLA establish and implement policy that ensured consideration would be sought for each contract containing nonconforming material. DLA nonconcurred with the recommendation, stating that its existing program for reducing nonconforming products was consistent with the Federal Acquisition Regulation. The issue was resolved that the DLA Action Plan for Continuously Improving the Quality of Spare and Repair Parts in the DoD Logistics System provided a feasible plan for significantly reducing the amount of nonconforming products accepted by DLA.

**Inspector General, DoD, Report No. 89-065, "Nonconforming Products in the Defense Supply System at Warner Robins Air Logistics Center,"** April 10, 1989, reported that \$14.4 million of spare parts were unusable and that the Air Force Quality Deficiency Reporting System did not provide an adequate data feedback system or a reflection of the quality of spare parts provided to the field. The report made two recommendations to improve the Quality Deficiency Reporting System. Air Force management concurred with both recommendations.

## **APPENDIX C - PRODUCT QUALITY DEFICIENCY REPORT ACTION POINT RESPONSIBILITIES**

DLAM 4155.2 spells out three areas of responsibility for the PQDR action point.

### **General Area of Responsibility**

- o Investigates, resolves, and responds in a timely manner and coordinates with cognizant Defense supply center elements to ensure that other functional organizations are kept abreast of actions taken on PQDRs.

- o Takes corrective action on reported defects and on the cause to preclude recurrence, issue immediate notification to users of the product if the deficiency is serious.

- o Provides instructions for disposition and credit allowances.

- o Analyzes and evaluates PQDRs to detect trends of poor quality products.

- o Identifies contractors who provide defective products.

- o Shares quality history information with the other Defense supply center elements and DoD Components.

### **Investigations of PQDRs**

- o Reviews the contract, complaints, item and contractor history, technical data, laboratory tests, and inventory balances.

- o Manages and coordinates the examination of the defective product.

- o Determines the need for an investigation by the support point (usually the DCMC) or determines the need for a quality system management visit by the action point.

- o Evaluates the total investigation results and determines if the PQDR is valid.

- o Takes the appropriate corrective action if the PQDR is valid.

### **Corrective Actions for PQDRs**

- o Screens on-hand inventory to identify and separate defective products.



- o Initiates recoupment actions against suppliers of defective products.

- o Coordinates reclassification with supply managers and, if needed, coordinates the disposition of inventory.

- o Notifies inspection activities of future inspections, contracting activities of future contracts, and requisitioning activities of quality deficiencies.

- o Acts to preclude recurrence by recommending specification changes, changes the contract technical data file, issues quality assurance letters of instruction to Inspection Activities, advises contracting officers of an adverse quality history, and notifies contractors of the PQDR.

# **APPENDIX D - SUMMARY OF RECOUPMENT ACTIONS**

	<u>DESC<sup>1</sup></u>	<u>DGSC<sup>2</sup></u>	<u>DLA<sup>3</sup></u> <u>Subtotal</u>	<u>CECOM<sup>4</sup></u>	<u>Total</u>
Number of Contracts	82	23	<u>105</u>	8	<u>113</u>
Value of Contracts	\$20,025,717	\$6,080,028	<u>\$26,105,745</u>	\$835,954	<u>\$26,941,699</u>
<u>Recoupments Obtained</u>					
Number of Contracts	21	2	<u>23</u>	6	<u>29</u>
Value of Recoupments Obtained	\$70,295	\$3,972	<u>\$74,267</u>	\$12,856	<u>\$87,123</u>
Value of Contracts	\$1,702,709	\$156,900	<u>\$1,859,609</u>	\$472,224	<u>\$2,331,833</u>
<u>Recoupments Attempted - Not Obtained</u>					
Number of Contracts	21	0	<u>21</u>	0	<u>21</u>
Value of Recoupments Not Obtained	\$3,226,246	0	<u>\$3,226,246</u>	0	<u>\$3,226,246</u>
Value of Contracts	\$7,375,063	0	<u>\$7,375,063</u>	0	<u>\$7,375,063</u>
<u>Recoupments Not Attempted</u>					
Number of Contracts	40	21	<u>61</u>	2	<u>63</u>
Value of Recoupments Not Attempted	\$90,566	\$5,809	<u>\$96,375</u>	\$298	<u>\$96,673</u>
Value of Contracts	\$10,947,945	\$5,923,128	<u>\$16,871,073</u>	\$363,730	<u>\$17,234,803</u>

- <sup>1</sup> Defense Electronics Supply Center recoupment actions on 82 contracts.
- <sup>2</sup> Defense General Supply Center recoupment actions on 23 contracts.
- <sup>3</sup> Subtotal of DESC and DGSC recoupment actions on 105 contracts.
- <sup>4</sup> Army Communications-Electronics Command recoupment actions on 8 contracts.

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# APPENDIX E - CONTRACTS RECOMMENDED FOR RECOUPMENT ACTIONS

<u>Buying Activity/ Contractor/ Contract Number</u>	<u>Electronic Component/ National Stock Number/ (Defect Description)</u>	<u>Original Contract Amount</u>	<u>Contract Amount Remaining Subject to Recoupment</u> <sup>1</sup>
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## DEFENSE ELECTRONICS SUPPLY CENTER (DESC)

### **ASTROCOM ELEC.**

DLA900-86-C-1198	Headset Microphone 5965-01-148-3396 (Microphone does not transmit or receive).	\$ 3,144,232	\$ 125,549
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### **HEWLETT-PACKARD**

DLA900-86-C-0273	Coupler 5985-00-490-2834 (Frequencies too low).	83,640	82,000
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Attenuator 5985-01-195-7374 (3dB and 7dB positions are out of tolerance).			
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DLA900-88-F-0974	Attenuator 5985-01-021-4931 (Inferior mechanical parts causing inter- mittent operation).	99,628	98,754
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DLA900-89-C-1210	Output Attenuator 5985-00-568-3606 (Attenuator switch not making contact with circuit board).	96,511	95,888
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### **HYDRA ELEC.**

DLA900-88-W-4668	Pressure Differential Switch 5930-00-703-7657 (Switch body has cracks in weld).	16,571	16,240
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See footnotes at end of appendix.

**APPENDIX E - CONTRACTS RECOMMENDED FOR RECOUPMENT ACTIONS** (cont'd)

<u>Buying Activity/ Contractor/ Contract Number</u>	<u>Electronic Component/ National Stock Number/ (Defect Description)</u>	<u>Original Contract Amount</u>	<u>Contract Amount Remaining Subject to Recoupment</u> <sup>1</sup>
<b>MICROTECH, INC.</b>			
DLA900-86-C-2414	Electric Dummy Load 5985-00-563-9679 (Measures 0.2 percent to 0.4 percent above electronic specifications).	\$ 34,710	\$ 34,461
DLA900-87-C-1161	Coupler 5985-01-048-7881 (Coupler fails to meet minimum MIL specifications).	79,900	76,704
DLA900-88-P-P840	Attenuator 5985-00-125-0708 (Attenuator power reading too high).	19,750	18,565
<b>MILLER, R.A.</b>			
DLA900-86-C-2876	Antenna 5985-00-993-4054 (Connector breaks away from blade).	91,000	90,220
DLA900-87-C-1275	Antenna 5985-00-217-0457 (Mount holes too deep).	183,094	182,578
<b>MPD, INC.</b>			
DLA900-87-C-0775 DLA900-88-D-0095- 0001	Electron Tube 5960-00-519-6176 (Vacuum tubes had air leaks).	952,296	190,300

See footnotes at end of appendix.

**APPENDIX E - CONTRACTS RECOMMENDED FOR RECOUPMENT ACTIONS** (cont'd)

<u>Buying Activity/ Contractor/ Contract Number</u>	<u>Electronic Component/ National Stock Number/ (Defect Description)</u>	<u>Original Contract Amount</u>	<u>Contract Amount Remaining Subject to Recoupment</u> <sup>1</sup>
<b>SONETRONICS, INC.</b>			
DLA900-87-C-0278	Microphone Headset 5965-01-148-3396 (Headset will not receive).	\$ 3,324,736	\$ 1,097,078
DLA900-88-C-1443	Microphone 5965-00-179-7762 (Microphone will not transmit).	861,219	25,694
DLA900-88-D-0059	Microphone Headset 5965-01-148-3396 (Headset will not receive).	3,321,866	132,772
Subtotal		<u>\$12,309,153</u>	<u>\$2,266,803</u> <sup>2</sup>
<b><u>DEFENSE GENERAL SUPPLY CENTER (DGSC)</u></b>			
<b>FPI, LEXINGTON, KY</b>			
DLA400-86-F-0060	Cable Assembly 5995-00-823-2913 (Pins shorted).	\$ 92,939	\$ 10,058
DLA400-86-F-0254	Cable Assembly 5995-00-889-0702 (Cable assembly has internal short).	133,534	9,943
DLA400-86-F-2116	Cable Assembly 5995-00-823-2840 (Pins shorted).	123,163	7,212

See footnotes at end of appendix.

**APPENDIX E - CONTRACTS RECOMMENDED FOR RECOUPMENT ACTIONS** (cont'd)

<u>Buying Activity/ Contractor/ Contract Number</u>	<u>Electronic Component/ National Stock Number/ (Defect Description)</u>	<u>Original Contract Amount</u>	<u>Contract Amount Remaining Subject to Recoupment</u> <sup>1</sup>
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**FPI, LEXINGTON, KY (cont'd)**

DLA400-87-F-1374	Cable Assembly 5995-00-823-2911 (Pins shorted, bent, broken).	\$ 138,519	\$ 9,354
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**FPI, MEMPHIS, TN**

DLA400-86-F-2042	Cable Assembly 5995-00-823-2832 (Connector not threaded).	230,537	11,383
DLA400-86-F-2232	Cable Assembly 5995-00-258-8423 (Pins shorted).	982,300	223,621

**FPI, OXFORD, WI**

DLA400-86-F-3643	Cable Assembly 5995-00-926-0770 (Pins shorted, failed voltage test).	78,809	6,226
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Subtotal	<u>\$ 1,779,801</u>	<u>\$ 277,797</u> <sup>3</sup>
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Total	<u>\$14,088,954</u>	<u>\$2,544,600</u> <sup>4</sup>
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**Summary of Potential Recoupments <sup>5</sup>**

A. DESC: \$2,266,803 x .05 = \$113,340  
 B. DGSC: 277,797 x 1.00 = 277,797

Total Potential Recoupment \$391,137

See footnotes at end of appendix.

**APPENDIX E - CONTRACTS RECOMMENDED FOR RECOUPMENT ACTIONS** (cont'd)

<sup>1</sup>Contract amount remaining was computed by multiplying the percentage defective on the PQDRs by the contract value of the inventory that may still remain in the Defense depots.

<sup>2</sup>Value of defective products that may still be in the DESC inventory on 14 contracts.

<sup>3</sup>Value of defective products that may still be in the DGSC inventory on seven contracts.

<sup>4</sup>Total value of defective products that may still be in the DESC and DGSC inventories on 21 contracts.

<sup>5</sup>Based on an historic voluntary recoupment rate of 5 percent for nonconforming products, the potential exists for recoupments of \$113,000 for DESC contracts; however, DGSC may be able to recoup \$278,000 from FPI, for a total recoupment of \$391,000.



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## APPENDIX F - SUMMARY OF INVESTIGATIVE ACTIONS

	<u>DESC</u>	<u>DGSC</u>	<u>CECOM</u>	<u>TOTAL</u>
Total Number of Contracts with Quality Deficiencies	82	23	8	113
<u>Investigating Quality Deficiencies</u>				
Number of contracts partially investigated.	49 <sup>1</sup>	3 <sup>1</sup>	5	57
Number of contracts not investigated.	16 <sup>1</sup>	19 <sup>1</sup>	3	38
Number of contracts completely investigated.	17	1	0	18
Additional number of contracts that should be completely investigated.	35	12	7	54
<u>Testing Quality Deficiencies</u>				
Number of contracts not tested.	34	23	8	65
Number of contracts tested.	48	0	0	48
Additional number of contracts that should be tested.	13	13	7	33
<u>Screening Quality Deficiencies <sup>2</sup></u>				
Number of contracts not screened.	37	21	4	62
Number of contracts screened.	45	2	4	51
Additional number of contracts that should be screened.	15	12	1	28

<sup>1</sup>Quality assurance actions were incomplete on 87 of 105 contracts awarded by DESC and DGSC [(49 + 3) + (16 + 19) = 87].

<sup>2</sup>Screening quality deficiencies refers to an examination of the inventory remaining in the depots to determine if other products supplied on a specific contract contain the same defects identified in a PQDR.

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**APPENDIX G - SUMMARY OF POTENTIAL BENEFITS RESULTING FROM AUDIT**

<u>Recommendation Reference</u>	<u>Description of Benefits</u>	<u>Amount and/or Type of Benefits</u>
A.1.a.(1)	Internal Controls. DLA can ensure that an adequate investigation is conducted to determine the extent of product nonconformances.	Nonmonetary.
A.1.a.(2)	Internal Controls. DLA can ensure that inventory is screened to determine the extent of nonconforming products in the inventory.	Nonmonetary.
A.1.a.(3)	Internal Controls. DLA can ensure that feedback is provided as required by DLAR 4155.24.	Nonmonetary.
A.1.a.(4)	Internal Controls. DLA can ensure that adequate documentation exists to support investigations of quality deficiencies.	Nonmonetary.
A.1.a.(5)	Internal Controls. DLA can ensure that quality deficiencies are adequately investigated.	Nonmonetary.
A.1.a.(6)	Internal Controls. DLA can eliminate organizational confusion concerning classification of product quality deficiencies as isolated instances.	Nonmonetary.
A.1.a.(7)	Internal Controls. DLA can ensure that quality assurance specialists take advantage of the FPI lifetime warranty.	Monetary benefits cannot be reasonably estimated.
A.1.b.	Internal Controls. DLA can ensure that adequate personnel performance is tied to adequate investigations.	Nonmonetary.

**APPENDIX G - SUMMARY OF POTENTIAL BENEFITS RESULTING FROM AUDIT**  
(cont'd)

<u>Recommendation Reference</u>	<u>Description of Benefits</u>	<u>Amount and/or Type of Benefits</u>
A.2.	Program Results. DLA can eliminate defective materiel from the Defense depot inventories and recoup on a portion of the defective products.	If DGSC successfully recoups from FPI and if DESC recoups at least 5 percent of the defective inventory it purchased, then recoupments of about \$391,000 are possible.
A.3.a.	Program Results. DLA can identify major nonconforming products supplied by FPI.	Nonmonetary.
A.3.b.	Program Results. DLA can determine the extent of major nonconforming products supplied in seven contracts in Defense General Supply Center inventories and recoup on all defective products identified.	Monetary benefits cannot be reasonably estimated.
A.3.c.	Program Results. DLA can recover the cost of testing, storage, transportation, and administration associated with the identification and administration of defective products.	Monetary benefits cannot be reasonably estimated.
A.3.d.	Internal Controls. Improve internal control checklist for documenting results of PQDR investigations.	Nonmonetary.

**APPENDIX G - SUMMARY OF POTENTIAL BENEFITS RESULTING FROM AUDIT**  
 (cont'd)

<u>Recommendation Reference</u>	<u>Description of Benefits</u>	<u>Amount and/or Type of Benefits</u>
B.1.	Program Results. CECOM can perform more effective product quality deficiency investigations.	Nonmonetary.
B.2.	Internal Controls. CECOM can ensure that postaward contracting officers are kept informed of recoupment actions for defective products.	Nonmonetary.
B.3.	Program Results. CECOM can recover the costs associated with the identification, storage, transportation, and administration of defective products.	Monetary benefits cannot be reasonably estimated.

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**APPENDIX H - DETAILED AUDIT RESPONSES TO FEDERAL PRISON INDUSTRIES COMMENTS**

The Federal Prison Industries (FPI) provided comments supporting requests to modify the audit report as it effected FPI. We have responded to the FPI comments as appropriate.

**FPI comment.** FPI requested that the report and Recommendation 1.a.(7) be amended to clearly acknowledge the true nature of FPI's warranty, that is, that the warranty covers defects in material and workmanship.

**Audit response.** We agree. The report was amended to clearly reflect that the FPI warranty covers defects in material and workmanship.

**FPI comment.** As with all warranties, FPI's warranty covers defects within the control of the manufacturer of the product. Problems caused, for example, by user mishandling or deterioration due to the passage of time beyond the shelf-life of the item as provided for in the specifications are not covered by warranty.

**Audit response.** None of the reported defects shown in this report were caused by mishandling of the products and none of the FPI supplied products included in the audit were subject to a shelf-life.

**FPI comment.** FPI requested that the report be modified to eliminate any suggestion that FPI pay for wholesale surveying and testing of inventory. FPI contended that such responsibility does not exist in FPI's statutory preference, nor in the FAR; it is not covered by the (FPI) warranty, it is not part of FPI unit cost estimates, and it is inequitable because the accumulation of defective inventory was caused by a breakdown in the (DoD) quality assurance system for which FPI is not responsible.

**Audit response.** The report recommends that DLA request FPI to pay the testing costs related to identifying defective products. We agree that the FAR does not require payment for tests made at other than the contractor's (FPI) premises. Defective products in the DoD inventory were not caused by a breakdown in the DoD quality assurance system. It is unreasonable to expect DoD to inspect and test every item accepted into the inventory. A contractor should install reliable quality controls to ensure consistent product quality and defect-free workmanship. The accumulation of defective inventory was caused by poor workmanship at FPI. As a responsible contractor for DoD, we believe FPI should pay for the testing that identifies defective products that FPI supplied.



**APPENDIX H - DETAILED AUDIT RESPONSES TO FEDERAL PRISON  
INDUSTRIES COMMENTS (cont'd)**

**FPI comment.** FPI requested that the "contract amount remaining subject to recoupment" in Appendix E, associated with Memphis contract DLA-400-86-F-2232, be amended to reflect a defect rate less than 1 percent, which is consistent with the rate taken from the DLA data base. Also, A 22-percent defect rate is contradicted by the single PQDR in existence on this contract, and the rate is inconsistent with DLA data base information.

**Audit response.** A defect rate of less than 1 percent for contract DLA-400-86-F-2232 is not an accurate defect rate. The computed defect rate used in the audit report is based on the number of failures to the total number examined. FPI computes a defect rate based on the number of failures to the total number supplied. Our computed defect rate shows that the DLA needs to determine how many defective products are still in its inventories. Further, the dollar amounts in the report are used to illustrate the potential for recoupment if the defect rate holds true.

**FPI comment.** As regards contract DLA-400-86-F-2232, FPI also stated that:

- o FPI tested 1,000 of 6,025 units that DGSC returned to FPI. None of the units tested by FPI failed.

- o All items were inspected and approved by the DoD factory inspectors prior to shipment, and it is unlikely that a 22-percent defect level could escape the scrutiny of this factory inspection.

- o There were seven PQDR report control numbers (PQDRs on the same contract from seven separate sources). Of the seven report control numbers only one showed contractor noncompliance, and none of the (seven) complaints showed that pins shorted.

**Audit response.** FPI test results demonstrate the need for independent laboratory testing to validate PQDRs. FPI incorrectly states that all items are inspected by DoD quality assurance representatives before acceptance. However, we noted that prison workers do inspect the final product at FPI but their inspection is not rechecked by FPI quality assurance employees. Eight PQDRs were recorded against contract DLA-400-86-F-2232. All eight PQDRs are recorded as contractor noncompliance in the DLA data base and the failure was described as "pins shorted" and "pins

**APPENDIX H - DETAILED AUDIT RESPONSES TO FEDERAL PRISON  
INDUSTRIES COMMENTS (cont'd)**

opened" on six of the PQDRs. We previously supplied copies of these PQDRs to FPI during the audit. On February 26, 1993, details of the six PQDRs that show "pins open" and "pins shorted" were again provided to the Deputy Chief Executive Officer, FPI, so that FPI will know what quality control changes were needed in their factories.

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## **APPENDIX I - ACTIVITIES VISITED OR CONTACTED**

### **Office of the Secretary of Defense**

Director of Defense Procurement, Washington, DC  
Assistant Secretary of Defense (Production and Logistics),  
Washington, DC

### **Department of the Army**

Communications-Electronics Command, Fort Monmouth, NJ

### **Defense Agencies**

Headquarters, Defense Logistics Agency, Alexandria, VA  
Defense General Supply Center, Richmond, VA  
Defense Electronics Supply Center, Dayton, OH  
Defense Contract Management Command, Alexandria, VA  
Defense Contract Management Area Operations,  
Chicago, IL  
Dayton, OH  
Grand Rapids, MI  
Hartford, CT  
Milwaukee, WI  
New York, NY  
Orlando, FL  
St. Louis, MO  
Springfield, NJ  
Syracuse, NY  
Van Nuys, CA

### **Non-DoD Activities**

Federal Prison Industries, Department of Justice, Washington, DC  
UNICOR Federal Prison Industries, Memphis, TN  
UNICOR Federal Prison Industries, Lexington, KY  
M P D, Incorporated, Owensboro, KY  
McGuire Products Company, Dayton, OH

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## **APPENDIX J - REPORT DISTRIBUTION**

### **Office of the Secretary of Defense**

Director of Defense Procurement  
Assistant Secretary of Defense (Production and Logistics)  
Assistant Secretary of Defense (Public Affairs)  
Deputy Assistant Secretary of Defense (Logistics)  
Deputy Assistant Secretary of Defense (Production Resources)  
Joint Logistics Systems Office, Assistant Secretary of Defense  
(Production and Logistics)  
Program Manager, Total Quality Management, Office of the  
Director, Administration and Management

### **Department of the Army**

Secretary of the Army  
Assistant Secretary of the Army (Financial Management)  
Assistant Secretary of the Army (Research, Development, and  
Acquisition)  
Inspector General, Department of the Army  
Auditor General, Army Audit Agency  
Commander, Army Materiel Command  
Commander, Communications-Electronics Command

### **Defense Activities**

Director, Defense Logistics Agency  
Commander, Defense Construction Supply Center  
Commander, Defense Electronics Supply Center  
Commander, Defense General Supply Center

### **Non-DoD Federal Organizations**

Office of Management and Budget  
General Accounting Office, National Security and  
International Affairs Division, Technical Information Center  
Inspector General, Department of Justice  
Federal Prison Industries, Department of Justice

Chairman and Ranking Minority Member of each of the following  
Congressional committees:

Senate Committee on Appropriations  
Senate Subcommittee on Defense, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on Defense, Committee on Appropriations

**APPENDIX J - REPORT DISTRIBUTION** (cont'd)

**Non-DoD Federal Organizations** (cont'd)

House Committee on Armed Services  
House Committee on Government Operations  
House Subcommittee on Legislation and National Security,  
Committee on Government Operations

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PART IV - MANAGEMENT COMMENTS

Department of the Army

Federal Prison Industries

DEPARTMENT OF THE ARMY COMMENTS



DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
WASHINGTON, DC 20310-0103



SARD-PC

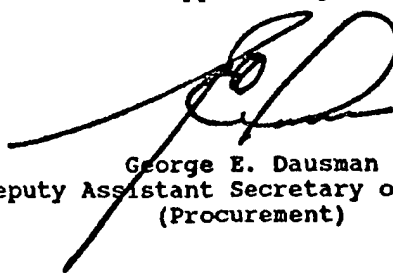
21 DEC 1992

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Draft Audit Report on Recoupments for Quality Defects (Project No. OCF-0062.02)

In response to your letter dated October 22, 1992, we have completed our review of the draft audit report on this subject and provide specific comments as an enclosure. Questions concerning our response should be directed to Mr. R. L. Endicott of my staff at telephone 695-0255.

We greatly appreciate the opportunity to provide these comments.

  
George E. Dausman  
Deputy Assistant Secretary of the Army  
(Procurement)

Enclosure

DEPARTMENT OF THE ARMY COMMENTS (cont'd)

Final Report

RECOMMENDATION B1. Screen the remainder of all inventories identified in Appendix E and return defective products to Federal Prison Industries for repair or replacement under the Federal Prison Industries warranty program.

Deleted

We concur with the principle of this recommendation. To that extent, it should be noted that 100% of all materials installed in Army combat vehicles are inspected before installation. Therefore, the product quality deficiency reports (PQDRs) cited in the draft report constitute the totality of defective items found in this case. However, at this time, we are unable to otherwise screen the inventories identified in Appendix E because those materials are high volume items long since consumed.

RECOMMENDATION B2. Revise Communications-Electronics Command Regulation 702-20, "Procedures for Processing Quality Deficiency Reports," and Communications-Electronics Command Concurrent Engineering Memorandum 10-95, "Processing Product Quality Deficiency Reports," to establish laboratory testing as a primary tool in the comprehensive investigation of a product quality deficiency.

Renumbered  
as B1.

We partially concur. These documents are currently under revision and will stress testing (to include laboratory testing) as an important tool in resolving PQDRs. However, we believe that requiring that laboratory testing be designated as the primary tool for the investigation of a product quality deficiency is inappropriate. There are many tools available for this purpose (e. g. visual and mechanical inspection, quantity count, etc.) and these should be selectively and appropriately employed. Complete reliance on laboratory testing would, in many instances, prove very costly while posing no more effective result than a less expensive (and possibly more effective) solution such as the use of quality control inspection stations.

RECOMMENDATION B3. Provide the Contracting Directorate with copies of validated Product Quality Deficiency Reports that relate to recoupment actions against contractors.

Renumbered  
as B2.

Concur. We have already taken action to implement this recommendation.

DEPARTMENT OF THE ARMY COMMENTS (cont'd)

Final Report

RECOMMENDATION B4. Request reimbursement from Federal Prison Industries for all testing, storage, transportation, and administrative costs associated with the determination and identification of defective inventory.

Renumbered  
as B3.

We partially concur. Federal Prison Industries has already reimbursed CECOM for the defective items identified in the draft report and has agreed to replace any other defective materiel subsequently found. CECOM has requested a legal determination of the propriety of seeking reimbursement for the other costs identified in the draft report. We will proceed in accordance with that legal determination.

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## FEDERAL PRISON INDUSTRIES COMMENTS



U.S. Department of Justice

Federal Bureau of Prisons

Office of the Director

Washington, DC 20534

December 22, 1992

David K. Steensma  
Director  
Contract Management Directorate  
Department of Defense  
400 Army Navy Drive  
Arlington, VA 22202-2884

Dear Mr. Steensma:

Re: Response to Draft Audit Report on Recoupments for Quality Defects (Project OCF-0062.02)

Enclosed are the comments of Federal Prison Industries, Inc. (FPI/UNICOR) on the above referenced draft DoD IG report relating to recoupments. FPI understands that the draft report and its recommendations are not formally addressed to FPI. Because several of the recommendations affect this organization directly and substantially, FPI very much appreciates this opportunity to review the draft and provide you with our comments.

The recommendations in the report which address improvements to the quality assurance process serve a very valuable purpose, and FPI is eager to work with DoD in improving the process.

For reasons explained in our comments, FPI requests that the report be modified in several ways: it should clearly and accurately set out the exact terms of FPI's warranty; it should not conclude that costs associated with surveying and testing of inventories be assessed against FPI; it should recalculate the "contract amount remaining subject to recoupment" in Appendix E to the report, as recommended by these comments; and it should adopt the suggestions proposed by these comments as the appropriate process for replacing defective units under FPI's warranty.

As with our responses to earlier DoD IG reports, FPI requests that its comments be included with the final report.

Sincerely,

A handwritten signature in cursive script, reading "Kathleen M. Hawk", is written over a horizontal line.

Kathleen M. Hawk  
Chief Executive Officer  
Federal Prison Industries  
Director, Bureau of Prisons

## FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)

Final Report

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### FPI RESPONSE TO THE DRAFT DOD IG REPORT ON RECOUPMENTS\*

#### 1. Introduction:

Federal Prison Industries, Inc. (trade name UNICOR hereafter referred to as FPI) has completed its review of the draft audit report dated October 22, 1992, "Report on Recoupments for Quality Defects (Project OCF-0062.02), prepared by the Office of the Inspector General, Department of Defense," (hereafter referred to as DoD IG report, or simply report).

FPI agrees with those recommendations that are aimed at improving the process by which contractors receive adequate feedback relating to the deficiencies described in product quality deficiency reports (PQDRs). FPI also agrees with the recommendations aimed at improving the overall effectiveness of internal controls related to the quality assurance actions needed to support requests for recoupments for defective products. FPI agrees that contracting officers must notify contractors of nonconforming products in writing in a timely manner, so that the contractors can investigate PQDRs and take appropriate action, including repair or replacement of defective products at no cost to the DoD, within the warranty. These corrective actions will significantly improve the process and be of great assistance both to DoD and to contractors such as FPI, and FPI will work with DoD in implementing these improvements.

#### 2. DoD IG Recommendations Relating to Recoupments from FPI:

The draft report contains three basic recommendations relating to recoupments<sup>1</sup> from FPI:

First, the report recommends that the director of the Defense Logistics Agency Director (DLA) require quality assurance specialists to take advantage of the lifetime warranty provided by FPI for all electrical products produced in Federal Prison Industries factories (report, p.23).

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<sup>1</sup> Recoupments may take the form of repair, replacement, or reimbursement. Report, p. 3.

\*FPI included seven attachments with their comments. The attachments were not included because of their length.

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Page 12.

Renumbered as  
Page 2.

## FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)

Final Report

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Second, the report recommends that the commander of the Defense General Supply Center (DGSC) perform random laboratory tests of products from FPI contracts to determine the extent of major nonconforming products and screen the inventory for defective products supplied under the contracts listed in Appendix E. Charges associated with the testing and screening are to be submitted to FPI and replacements or reimbursements are to be made by FPI (report, pp. 23, 24).

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as Page 12.

Third, the report recommends that the commander of the Communications-Electronics Command (CECOM) screen the remainder of all inventories identified in Appendix E under FPI's warranty program and return defective products for replacement. As with recommendation two, charges associated with the screening are to be submitted to FPI (report p. 29).

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as Page 17.

For reasons set out below, FPI suggests a modification to the wording of the first recommendation so as to accurately state the terms of its warranty, and nonconcurs with that part of the second and third recommendations relating to reimbursement from FPI for costs associated with testing and screening. FPI suggests an alternative method for obtaining recoupments from FPI contracts, pursuant to its warranty.

3. FPI's Response to the DoD IG's Recommendations Regarding FPI Warranties, Survey and Testing of Inventory, and Recoupments from FPI:

a. Warranty:

FPI is proud of its warranty and stands behind it completely. However, it is critical to the report that FPI's warranty be properly stated and understood.

The most recent statement of the warranty, which appears in FPI's current Electronics Brochure (Attachment 1), provides as follows:

Product Warranty

UNICOR, Federal Prison Industries, Inc., warrants its products to be free from defective materials and workmanship. If the materials and workmanship in our products do not meet contract specifications, notify the Quality Assurance Manager immediately. We stand behind our products and your satisfaction is our ultimate goal. (Emphasis added.)<sup>2</sup>

<sup>2</sup> This warranty is identical to the warranties in existence in 1986 and 1987, the dates relevant to the contracts covered by the audit. Copies of these warranties are attached to our comments (Attachment 1).



## FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)

Final Report

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The draft report (page 23, subparagraph 7) does not quote FPI's warranty, but restates it, dropping the reference to defective materials and workmanship. This is not an accurate restatement of the warranty. As with all warranties, FPI's warranty covers defects within the control of manufacturer of the product; it is not, as suggested by the restatement of the warranty in the report, a lifetime warranty for defects regardless of the cause of those defects. Problems caused, for example, by user mishandling or deterioration due to the passage of time beyond the shelf-life of the item as provided for in the specifications, are not covered by warranty.<sup>3</sup>

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as Page 12.

### b. Responsibility for Survey and Testing:

The report recommends that inventories be screened and tested at FPI expense, and that the defective units in those inventories be returned to FPI for repair or replacement. The report bases its recommendation that FPI be responsible for costs associated with surveying and testing inventory, on FPI's procurement preference.<sup>4</sup>

FPI's statutory preference requires that government departments and agencies purchase from FPI when its products meet specifications and are priced at or under the current market price. 18 U.S.C. 4124(a). There is nothing in FPI's statutes, nor in FPI's warranty, that makes FPI responsible for wholesale testing and surveying of inventory, especially under circumstances such as those covered by this report.

Nor does the Federal Acquisition Regulation (FAR) provide for such survey and testing at the contractor's expense. The FAR provides a clause covering inspection of supplies for fixed price contracts, which is to be inserted in fixed price contracts. This clause states that the Government (in this case, DoD) shall bear the

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<sup>3</sup> The Military Specification (MIL-C-3432)(Handbook 695) for the FPI Memphis contract, which is the contract at issue in these comments, establishes an expected shelf storage life of 3 years (Attachment 2). Any testing must therefore determine whether the defect was the result of deterioration beyond the limits in the specifications, as opposed to defective material or workmanship which is covered by FPI's warranty.

<sup>4</sup> "Since DoD is required by law to buy from FPI, then FPI should be obligated to reimburse DoD for all costs associated with the determination and identification of nonconforming products." See report, p. 29. Also see p.15.

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as Pages  
17 and 8.

## FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)

Final Report

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expense of Government inspections or tests made at other than the contractor's or subcontractor's premises. FAR 52.246-2(d). This clause was incorporated into the Memphis contract, which is the contract at issue in these comments.<sup>5</sup>

Moreover, the costs associated with surveying and testing of inventory should not be the responsibility of FPI because the buildup of defective inventory is due to a breakdown in the quality assurance system, which the IG report candidly concedes is under the control of DoD. As stated by the draft report:

"The Defense Supply Centers (DEC and DGSC) did not perform complete quality assurance investigations needed to obtain recoupments for defective electronic products. The investigations were incomplete because quality assurance specialists frequently curtailed investigations of PQDRs without validating quality deficiencies through product testing or verification with the supplier, and the inventory was not screened for other defective products. In addition, the supervisors of quality assurance specialists did not ensure that PQDRs were completely investigated." (report, p. 9.)

Renumbered  
as Page 5.

It is inequitable and inconsistent to place responsibility for the breakdown in quality assurance with DoD, but responsibility for costs associated with surveying and testing the inventory with FPI.

Further, it is inequitable to place such costs on FPI because the price of the cables was not negotiated or established based on such costs. One important element in setting the price of the product is the cost associated with testing. FPI estimated the cost of testing based on the assumption that DoD's quality assurance system was functioning adequately, including adequate feedback of information regarding defects. Unit cost statements are provided to DoD; these have never been objected to as inadequate for predicting costs associated with screening and testing. DoD has never previously asked FPI to pay for such surveys or testing, nor has FPI ever asserted that it would be responsible for such costs. It would be completely improper to introduce new costs, especially those resulting from the breakdowns in quality assurance that were the responsibility of DoD and not of FPI.

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<sup>5</sup> DDLA400-86-F-2232. The clause is incorporated by DGSC Form P-101 (Rev Apr 84), clause A24.

## FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)

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### c. Amount Remaining in Inventory:

The report states that the potential exists for DGSC and CECOM to recoup \$288,877 from FPI (DGSC, \$277,797; CECOM, \$11,080).<sup>6</sup>

These amounts are set out at Appendix E, "Contracts Recommended For Recoupment Actions." The last column in Appendix E is captioned "Contract Amount Remaining Subject to Recoupment." The amount "subject to recoupment" was computed "by multiplying the percentage defective on the PQDRs by the contract value of the inventory that may still remain in the Defense depots."<sup>7</sup> This calculation results in relatively small dollar amounts in eight of the nine contracts covered in the Appendix. Only the FCI Memphis contract, DLA 400-86-F-2232, for which the original contract amount was \$982,300, is associated with a substantial amount subject to recoupment--i.e., \$223,621. Since this contract represents the great share of the recoupment requested, analysis in these comments is confined to this contract. However, a similar analysis is applicable to the other 8 contracts.

### d. Amount Subject to Recoupment:

The amount subject to recoupment is based on erroneous information. Again, according to Appendix E (footnote 1), the figure \$223,621 was derived from PQDR information. Since \$223,621 is approximately 22 percent of the total value of the contract (\$982,300), the IG apparently determined from PQDR information that the defect rate associated with this contract was approximately 22 percent. The report does not cite to a specific PQDR, nor any other documentation supporting such an inordinately high defect rate.

FPI has subjected a large sample of the cables in this contract to testing. Additionally, FPI has significant documentation concerning the defect rate associated with this contract. The defect rate attributed to the contract by the report is not supported by test results or documentation.

First, on November 16, 1992, 6,025 units from this contract were returned to FPI Memphis by DGSC. FPI Memphis, with participation by DGSC, performed appropriate testing --i.e., continuity, insulation resistance, and dielectric withstanding voltage testing, in conformance with MIL-C-3885F. The tests were performed on 350 of the 6,025 units. None of the tested units failed.

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<sup>6</sup> Appendix E, fn. 6.

<sup>7</sup> Appendix E, fn 1.

## FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)

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Second, the defect rate shown in the report is significantly higher than the defect rate associated with the other FPI contracts listed in Appendix E, contracts which are similar to this one.<sup>8</sup>

Third, all items were inspected and approved by the DoD factory inspectors prior to shipment, and it is unlikely that a 22 percent defect level could escape the scrutiny of this factory inspection.

Fourth, a 22 percent defect rate is contradicted by the single PQDR in existence on this contract, as provided to FPI by DoD.

Finally, 22 percent is inconsistent with and far in excess of the defect rate as revealed by DLA data base information.

The sole PQDR in existence on this contract (Report Control Number W22G1G 90 0207) appears at Attachment 3. This PQDR shows that 10 cables were received, 10 inspected, and 1 was deficient, reflecting a deficiency rate of 10 percent, not 22 percent. However, a single PQDR should not be used to determine the amount subject to recoupment, as it is statistically invalid to extrapolate from a sample of 10 units to approximately 45,000 units, which constitute the entire contract.

In fact, the actual rate of defects is less than 1 percent. In connection with an earlier, related DoD IG Study on quality,<sup>9</sup> FPI requested and obtained from DLA all information concerning defects related to this and certain other contracts. There were seven (7) complaints or "Report Control Numbers" (RCNs) made with regard to this contract (Attachment 4.) Four of the seven show that the cause of the defect cannot be determined (W22G1G80141, W22G1G880313, W22G1G880315, and W22G1G880326); one (W22G1G900194) shows the cause to be "user mis-application"; one (W22G1G900207) shows "open circuit"; and only one (W22G1G880224) shows "contractor non-compliance." None of the complaints shows "pins shorted," the defect description shown in the DoD IG report.

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<sup>8</sup> Also, it is significantly higher than the defect rate associated with the similar contracts reviewed in the original DoD IG audit on quality, which was the precursor to the present audit. As FPI pointed out in response to the earlier audit: "FPI contracts included in the audit represented over 300,000 units shipped. Thus, the number of deficient units comprise a very small portion of the total units shipped." (FPI Comments to Project No. OCF-0062, p. 2.)

<sup>9</sup> "Quality Assurance Actions Resulting from Electronic Component Screening," Project No. OCF-0062.

## FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)

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There are no PQDRs in existence associated with the other six Report Control Numbers. However, FPI obtained information from DLA's data base showing the number of items shipped versus the numbers defective. (See Attachment 5.) This shows the defect rate associated with this contract is less than 1 percent.

In sum, tests and documentation contradict a defect rate of 22 percent and substantiate a defect rate substantially less than 1 percent.

### e. Accumulation of Defective Inventory:

In any event, as indicated above, the accumulation of defective inventory over a period of time was caused by the breakdown of the DoD's reporting and feedback system. FPI was not notified in a timely way about defects, and thus had no opportunity to contain the damage and to prevent buildup of potentially defective inventory.

This is especially significant with regard to the "LOF" cable, the item covered by this contract. Prompt feedback of information from the quality assessment program would have resulted in corrective action. In fact, an Engineering Change Proposal (ECP) was initiated for this item, but not until April, 1992, with the result that design improvements have been made which should greatly reduce the defects, including defects identified in the RCNs (Attachment 6). These design improvements would have been made earlier, had FPI been promptly notified of the problem.

### f. Only Defective Units Should be Shipped Back to FPI at FPI's Expense:

DGSC returned two shipments of cables to FPI Memphis, one totalling 6,025 cables and a second, sent COD, totalling about 9,200 cables. In communications prior to this, FPI asked that exhibits first be returned for testing. Thus, on June 17, 1992, DGSC notified FPI of a quality problem in this contract and asked that 9,386 units be repaired or replaced, citing high voltage shorts as the reason for the rejection. On June 24, 1992, the FCI Memphis requested two exhibits to test. No response was made by DGSC to the request for exhibits.

On July 27, 1992, DGSC wrote again concerning this matter, this time to FPI headquarters, stating that the material continued to short during high voltage testing and asking FPI to replace the material at no cost to the Government. On August 4, 1992, FCI Memphis wrote that exhibits were never received. (Correspondence at Attachment 7.)

The FAR provides that when supplies are returned to the contractor, the contractor shall bear the transportation cost from the original point of delivery to the contractor's plant and returned to the

## FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)

Final Report

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original point, provided the supplies have been determined to be defective in material or workmanship or otherwise not in conformity with contract requirements. FAR 52.246-2(1)(1). The FAR further provides that the government may require the contractor to correct or replace the defective or nonconforming supplies at the original point of delivery or at the contractor's plant.

As indicated above, with regard to the 6,025 units that were shipped back to FPI from DGSC, none of the 350 units tested were defective. Compliance with FPI's request to provide exhibits would have prevented the unnecessary return of inventory.<sup>10</sup>

#### 4. Conclusion: Requests by FPI for Modifications to DoD IG Report:

a. FPI requests that the report (e.g., at p.15, and recommendation 1.a.(7) p. 23) be amended to clearly acknowledge the true nature of FPI's warranty-- that is, that it covers defects in material and workmanship.

b. FPI requests that the report be modified to eliminate any suggestion that FPI pay for wholesale surveying and testing of inventory (e.g., at recommendation 3c, report, p. 24 and recommendation 4. p.29). Such responsibility does not exist in FPI's statutory preference, nor in the FAR; it is not covered by the warranty, is not part of its unit cost estimates, and is inequitable because the accumulation of defective inventory is caused by a breakdown in the quality assurance system for which it is not responsible.

c. FPI requests that the "contract amount remaining subject to recoupment" in Appendix E, which is associated with Memphis contract DLA400-86-F-2232, be amended to reflect a defect rate less than 1 percent, which is consistent with the rate taken from the DLA data base as discussed in these comments. Because this contract is typical of the other eight FPI contracts listed in Appendix E, FPI requests that the amount remaining subject to recoupment associated with the other eight contracts also be modified in the same manner.

d. With regard to recommendations that the Commander of CECOM and DLA return defective products to FPI for repair or replacement under the FPI warranty program, FPI suggests the following process:

- (1) FPI will be responsible for shipping costs associated with units determined to be defective and

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<sup>10</sup> MIL-C-3885F specifies that a lot size of 6,025 requires a sample of 200. Since this cable carries an acceptable quality level (AQL) of 0.65, a tolerance of 3 defective units would be permitted. Thus, the test results exceeded DoD requirements.

Revised and  
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8 and 12.

Renumbered  
as Pages  
12 and 17.

**FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)**

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covered by its warranty, but not for the shipping costs of units which are not defective or not covered by the warranty.

(2) Any unit that does not pass testing and that comes within the terms of FPI's warranty will be replaced by FPI free of charge.

FEDERAL PRISON INDUSTRIES COMMENTS (cont'd)



U.S. Department of Justice

**UNICOR**

Federal Prison Industries, Inc.

Washington, DC 20534

February 1, 1993

David K. Steensma  
Director  
Contract Management Directorate  
Inspector General  
Department of Defense  
400 Army Navy Drive  
Arlington, VA 22202-2884

Re: Project OCF-0062.02

Dear Mr. Steensma:

This is in further reference to the above draft audit report on recoupments for quality defects, and to the comments which Federal Prison Industries (FPI) provided to you on December 22, 1992.

You will recall that DGSC returned substantial shipments of cables to FPI Memphis, notwithstanding prior requests from FPI that exhibits first be returned for testing.

In our comments of December 22, we advised you that 350 of the returned units had been tested at FCI Memphis and that none had failed. I have just been notified that 1000 of the cables that were returned have been tested, and that no defects have been found in any of those cable assemblies. The tests employed all applicable specifications and standards, and the testing has been performed with the participation of DGSC.

One of the principal points made in our December 22 comments was that the draft IG report grossly overestimated the amount subject to recoupment from the Memphis contract, and by extension the amount subject to recoupment remaining in inventory connected with all DDGSC and CECOM contracts was drawn into question. This is now confirmed by actual testing. We, therefore, reiterate our request that the report be modified to correct these figures.

Would you please include these supplemental comments, along with our comments as filed on December 22, 1992, with your final report.

Sincerely,

*Irving B. Kuselbaum*

Richard P. Seiter  
Assistant Director



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## INTERNET DOCUMENT INFORMATION FORM

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**B. DATE Report Downloaded From the Internet:** 05/12/99

**C. Report's Point of Contact: (Name, Organization, Address, Office Symbol, & Ph #):** OAIG-AUD (ATTN: AFTS Audit Suggestions)  
Inspector General, Department of Defense  
400 Army Navy Drive (Room 801)  
Arlington, VA 22202-2884

**D. Currently Applicable Classification Level:** Unclassified

**E. Distribution Statement A:** Approved for Public Release

**F. The foregoing information was compiled and provided by:**  
DTIC-OCA, Initials: \_\_VM\_\_ Preparation Date 05/12/99

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